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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,950	02/17/2004	Hardayal Singh Gill	HIT1PO72/HSJ920040006US1	2286
50535 7590 02/21/2007 ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			EXAMINER KLIMOWICZ, WILLIAM JOSEPH	
			ART UNIT	PAPER NUMBER
			2627	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/21/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/780,950

Applicant(s)

GILL, HARDAYAL SINGH

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

In the Applicant's supplemental Response, filed October 5, 2006, to the restriction requirement mailed May 25, 2006, the Applicant stated:

The Examiner has required Applicant to elect between two groups of claims, group I as recited by claims 1-7, 9-16 and 18-20 and group II as recited in claims 8 and 17. The Applicant hereby elects, without traverse, group I for prosecution. Accordingly, claims 8 and 17 have been withdrawn from consideration.

In addition, that Examiner has required that the Applicant elect from among 4 species to be prosecuted in the event that no generic claim is found allowable. The Applicant hereby elects Specie I, as discussed in Figures 2-6 and claimed in claims 1-12.

See page 12 of Applicant's response filed on October 5, 2006.

Therefore, in Applicant's view, the claims corresponding to Group I and Species I of Applicant's disclosure are claims 1-7 and 9-12.

The Examiner, however, maintains that claims 9-12 do not read on the elected embodiment corresponding to Figures 2-6 of Specie I. For more in-depth discussion, see rejection of claims 9-12, *infra*.

Thus, claims 9-20 are withdrawn from further consideration, as it pertains to the applicability of prior art, pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 5, 2006.

Specification

The disclosure is objected to because of the following informalities:

With regard to page 14 (line 8), the reference designators **720** and **722** should be changed to the reference designators **723** and **725** in order to remain consistent with the Figure 7 and also other portions of the specification; see also the specification at page 14 (line 23 through page 15, line 1).

Appropriate correction is required.

Claim Objections

Claims 5-7 are objected to because of the following informalities:

With regard to claim 5 (line 1), the word --of-- should be inserted between the words “one” and “said.”

With regard to claim 5 (line 2), the word “layer” should be changed to the word --layers--

With regard to claim 6 (line 1), the word “magnetic” should be changed to the word --magnetoresistive--.

With regard to claim 7 (line 1), the word “magnetic” should be changed to the word --magnetoresistive--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1 (lines 13-15), the phrase "a first layer of antiferromagnetic material ... extending laterally outward there from (the pinned layer) said layer of ferromagnetic material contacting a portion of said free layer outside of said track width," is misdescriptive with respect to the Applicant's disclosure, thus rendering the claims indefinite.

More concretely, the Applicant's disclosure sets forth wherein a first (or second) layer of antiferromagnetic material extends laterally outward from a pinned layer, wherein the first (or second) antiferromagnetic material contacts a portion of the free layer outside of the track width.

Assuming with regard to claim 9, the Applicant is of the opinion that claim 9 (and claims 10-12 which depend therefrom), does in fact read on the elected embodiment of Group I, Species I, then, with regard to claim 9, which the Applicant maintains read on elected embodiment Species I (Figures 2-6), the phrase "first and second bias layers formed above said free layer *exclusively* in regions outside said track width region" (emphasis added) renders the claim indefinite, since clearly the scope of the claim does not correspond to the elected embodiment.

More concretely, claim 9 appears well suited to read on Figures 7 and 8 (Species II). As shown in Figure 2, there is a single bias layer (220) which resides not only in the regions outside the track width (TW), but also within the track width (TW) (e.g., see Figure 2). In

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contrast, non-elected Species II depicts and describes first and second bias slayers (706, 708) formed above the free layer (702) *exclusively* in regions outside the track width region (TW) (e.g., see Figure 7). Intermediate layer (728), is disclosed as a layer of non-magnetic material.

The following phrase(s) lack clear antecedent basis within the claim(s), i.e., either the particularly recited passage fails to be properly introduced prior to its appearance at that point in the claim or the structure recited in the passage is not an inherent part of or component of the previously recited structure:

(I) Claim 4 (line 1-2), the phrase "said outer first and second outer portions."

(II) Claim 4 (line 2-3), the phrase "said center region."

(III) Claim 5 (line 2-3), the phrase "said intermediate and outer regions."

(IV) Claim 6 (line 2), the phrase "said intermediate and outer regions."

(V) Claim 6 (line 3), the phrase "said center region."

(VI) Claim 7 (line 2), the phrase "said intermediate and outer regions."

(VII) Claim 7 (line 3), the phrase "said center region."

Conclusion

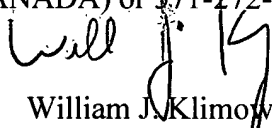
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK